

**METHOD FOR THE SELECTIVE ABSORPTION OF  
OXYGEN FROM A GAS MIXTURE**

**Abstract of the Disclosure**

The invention relates to a method for the selective absorption of oxygen from a gas mixture, preferably ambient air, into a liquid medium, followed by releasing of the oxygen so as to make it available in a concentrated form as a reaction partner for combustion or oxidation reactions, at least one ionic compound which is liquid at the respective processing temperature being used as a medium. The inventive method is characterized in that at least one ionic liquid is used as a medium, which has great reversible oxygen absorbing capacity that is selective towards other gases, particularly nitrogen.